OBSERVER

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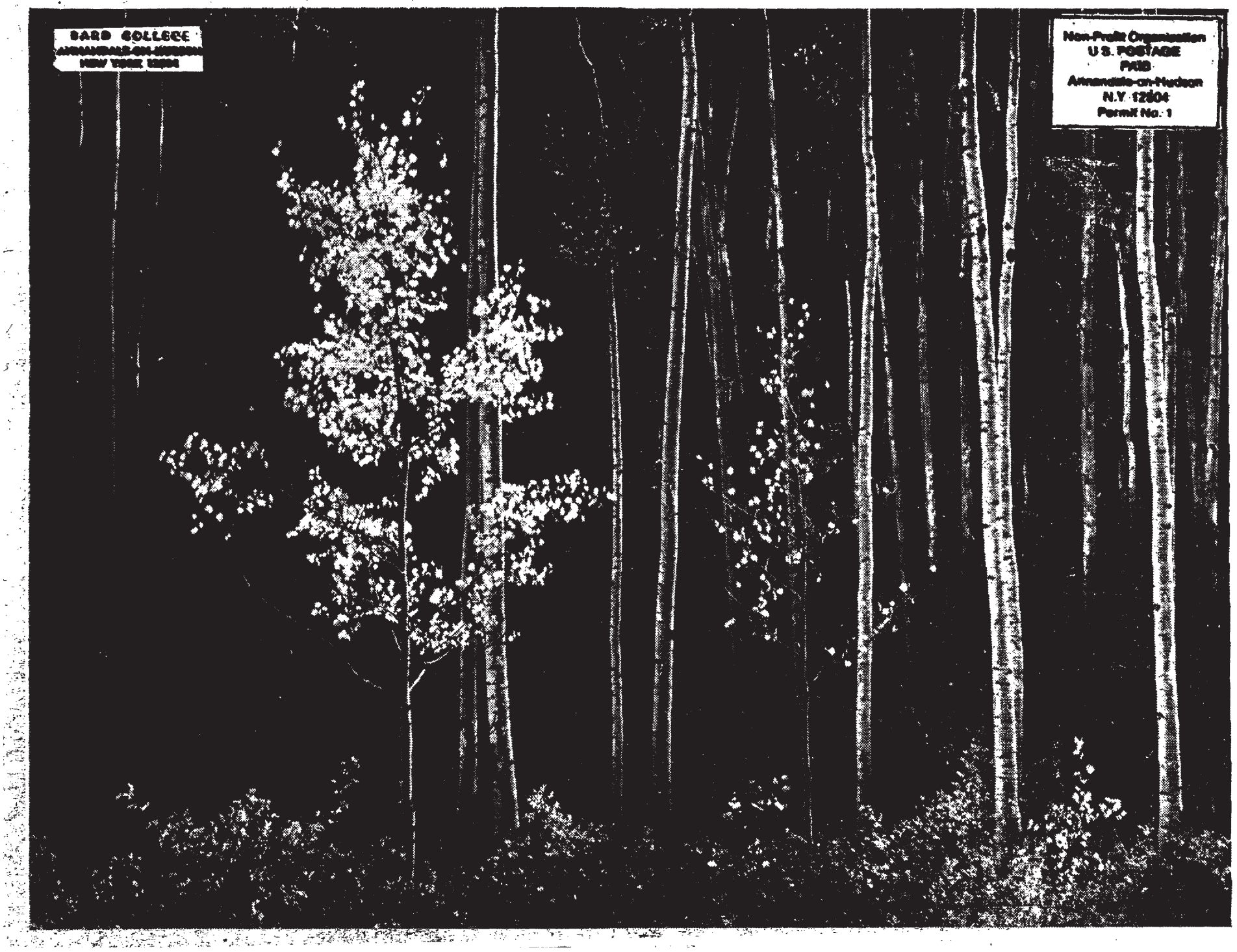
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POLLUTION PROBLEMS

A SPECIAL EDITION OF THE BARD OBSERVER

INDIAN POINT: MESSY AND DEADLY

CHARLES LENK

I did not know what the Indian Point Nuclear Power Plant was the first time I saw it. I was driving north on route 9W and so had a spectacular view of the two 330-feet high domes and the complex surrounding them from across the river; though I knew a nuclear plant existed on the Hudson at about that point, my knowledge of what one looked like consisted solely of the funnel-shaped containment buildings that Three Mile Island made famous to the world. But these bear no resemblance to the containments at Indian Point. Even so, whether I knew what the structure was or not, I was awe-struck by it. Frightened, perhaps, is the word; the Indian Point plant does not have the look about of something that is working for the good of mankind. When I found out what those masses of concrete actually were, I would point them out to friends of mine as we drove past. I was surprised at how many had a similar reaction to mine. I never expected that I would want to have less than the Hudson separating me from Indian Point.

I remembered this feeling on March 19 when the guard at the gate waved myself and my companions inside. The gatehouse was hidden from the plant by a low hill; as we came near the crest, I wondered what the plant would actually look like from such a close proximity. Would it be even more forbidding than it looked from across the river? Would the sight of people actually in and around the plant make it seem less fearsome? Should I worry about exposing myself to radiation at the plant? Would I actually be able to see anything worthwhile around the place? Then - over the crest of the hill, into a massive parking lot almost filled with thousands of cars. And beyond that- but I get ahead of myself.

My purpose in visiting Indian Point was formulated after several nights of pouring over anti-nuclear material provided by the SHAD Alliance, WESPAC, and the Union of Concerned Scientists, three citizens-action groups that are actively pressing for the shutdown of the Indian Point Plant. I wanted to see the other side of the problem. Plus, I simply wanted to have a look inside a nuclear power plant; the fact that this plant was one that upset so many people only increased my curiosity.

My companions on the trip were an interesting trio. There was Joseph Klauber, our driver; who, it seemed, was more curious than concerned and didn't say much during our time at the plant; Gabrielle Feldman, our photographer; and Suzanne LaMuniere, one of 214 people arrested at Indian Point for civil disobedience during a WESPAC - sponsored Hiroshima Day demonstration on August 6, 1979. She consequently spent several days in jail. Needless to say, Suzanne knows a lot about Indian Point. During our visit, she asked the most knowledgable and penetrating questions, and best managed to pin down our guide when he was being evasive (say, 80% of the time).

All told, we spent an hour and half in the Indian Point Complex under guidance of one Bob Healey, who introduced himself as the Head of Education for Indian Point (read: Chief PR man). During that time we were not allowed to venture into the plant itself, as was to be expected; instead, we stayed in the Visitors Center, a large multi-level building perched on a hillside overlooking the plant to the west. The Center was, at most, 100 yards from the fence surrounding the plant. Most of the plant was visible both from the glass-walled interior and the outdoor Visitors' Plaza (complete with mounted telescopes pointing at the most "important" parts of the plant). The Emergency Diesel Generator Housings (reputed by the UCS to provide inadequate protection for the diesels) were not visible from the concourse; nor were they visible from the large blueprint on the wall inside. The domes of Units 2 and 3,though, were visible; you can't ignore a 330-foot concrete structure that resembles a missile silo. These looming monstrosities made the low dome of Unit 1, for awhile more dangerous than the other two put together, seem insignificant. (During the course of the interview, Bob Healey asserted that these domes, with their 4½ feet thick reinforced concrete walls, would withstand anything short of a direct hit by a nuclear bomb - including a 727 jet crashing into one. Hmmm...)

"A person living every minute at the boundary of one of our licensed power plants, drinking the discharged water, breathing the air, and eating the fish from the same water, would have to remain there more than 200 years to get the same radiation exposure effect as would result from a single chest X-ray."

-Plaque in Indian Point Visitor's Center quoting former U.S. Atomic Energy Commissioner Charles Larson

I really have to admire Bob Healey. He does his job well. Of course, to be spokesman to the public for one of the most-attacked pieces of property in the country one cannot be a fool; one has to be tactful, skilled at working one's answers into the framework of the com-

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INDIAN POINT

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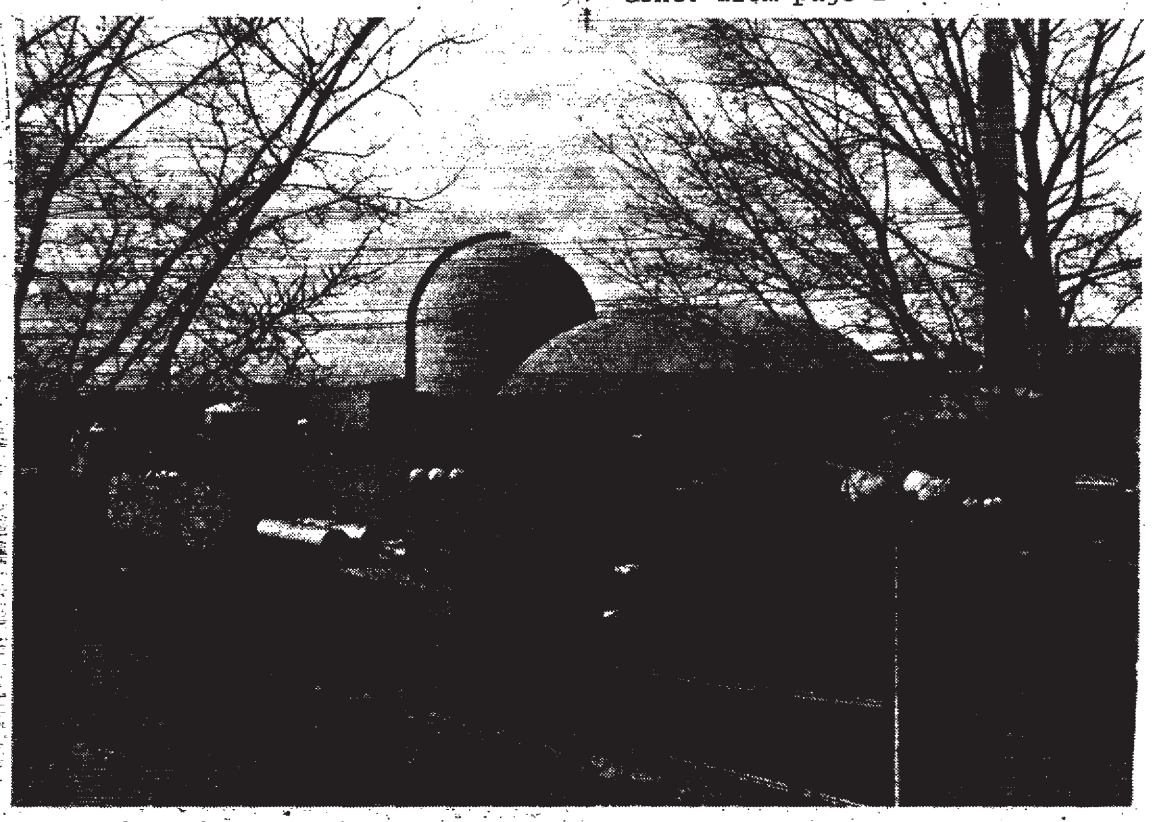

pany policy without being a parrot, polite yet firm about not answering loaded questions, and evasive without letting the questioner know they are being evaded. In other words, one must have the skill of a Ron Nessen. While Bob Healey couldn't quite make it to the White House yet, another couple of years of practice at Indian Point might make him a likely candidate for the job. He was smooth without being oily, helpful without being too informative (75% of the things he said could have been learned by reading one of the information booklets available at the door); at an age estimated by us in his early thirties, married without children, nattily attired without being overdressed, he was the very picture of a bright young man quite sure of his capabilities and in a position that suited him perfectly. It was hard not to like him. In fact, it wasn't until we were headed north on Route 9 that I realized what a verbal screwing he had given us.

(S.L. is Suzanne, C.L. is myself, and B.H. is Mr. Healey)

BH: Unit 1 is officially retired. It's been used, and is still being used as a research facility. There is Research and Development work that goes on in there, a lot of it in co-ordination with the Department of Energy, related not only to nuclear but to conventional fossil-fuel energy.
SL: The reactor in Unit 1 has not been decontaminated since it was shut down, right?
BH: The plant hasn't been decommissioned yet. It's officially retired but not decommissioned.
CL: Are there any plans for decommissioning anything else in the future?
BH: There are plans for decommissioning Some of these plans are subject to change as time goes on. The last I heard was that we plan to decommission Units 1 and 2 simultaneously in 2006, and by doing the two of them together we will benefit from the economics of scale.
(Gives statistics: Unit 2 is much newer and larger than Unit 1 - Unit 1 made about enough electricity to supply one-quarter of a million people, while Unit 2 can supply one million. Unit 1 was a 258 megawatt plant, Unit 2 an 865 megawatt plant; Unit 3 is practically a clone of Unit 2. Average output for 2 and 3 in a year is 25% of electricity used in New York City and Westchester County; based on present oil prices, 2 and 3 save customers a yearly average of $600,000,000.00).
SL: But Con Ed has some of the highest electric rates in the country.
BH: Yeah.
SL: Well, why is that?
BH: Most of our generation is oil-fired. Unit 2, which is the only nuclear station we own, represents about 16% of our power output. Oil has gone from $2.80 a barrel in 1973 to $40 a barrel today. New York City has the most stringent air control requirements in the U.S.: Con Ed is required by law to burn oil with a sulfur content of 3/10 of 1 percent. That kind of oil isn't available domestically - the only place we can get it is mostly from OPEC, where we have to pay a lot for it. You'll notice that when Unit 2 goes down for refueling there is a substantial rise in rates because we have to make up for that missing power with our oil-fired stations. I don't know off-hand what that comes down to per customer per month.
CL: Would you look that up please?
BH: Sure. (He never did). By the way, I still haven't finished answering your question. Another big part is taxes. Con Ed, by a factor of 2 to 10 times, pays higher taxes than any other major utility in the U.S. We are the only utility that has to pay a 40% sales tax on fuel. New York politicians have found that Con Ed is a very convenient way to collect taxes. When you get your bill, roughly 27% are taxes hidden in it. So while it looks like Con Ed is the bad guy, it's actually taxes.
CL: Is another reason the expensive insurance rates you pay? Something like $86 million a year? (Iwas way off - I.P. pays $800,000 a year in premiums, still the highest paid by any nuclear station in the country.)
BH: (Blankly) I'm not sure. It would make sense, since we're in such a densely populated area.
CL: Could you look that up for me?
BH: Yes, later. (Again, he didn't.)
SL: Indian Point also has a high accident rate compared to the rest of the nuclear industry. It seems to me that that has something to do with the constant increase in electricity rates.
BH: Indian Point saves money. Since 1972 Unit 2 has paid for itself more than 3 times over. This is the most economic electricity in our system.
SL: That doesn't answer my question, about accidents and how they affect--
BH: No, you changed - deferred your question.
SL: Since it seems that whatever goes on inside the plant that involves rising costs does get passed on to the customer I would assume that a high accident rate would also have something to do with an increase —
BH: I don't know what you mean by a "high accident rate". According to whom do we have one?
SL: According to information from Mobilization for Survival, which comes from a variety of sources. It's a comparative thing to the rest of the industry.
BH: High Accident Rate - it depends on what you're defining as an accident. Now there are what are called "Licensee Events". When SHAD and WESPAC had a demonstration here a couple of years ago, that was an "Event", something that has to be reported to the NRC. What's interesting is that they'll put that down as being an "accident". In any case, a Licensee Event Report is something that the people from WESPAC and SHAD probably mean by "accident". And they'll say something like Indian Point had 246 LERs in five years of operation and it sounds really horrendous. But among those LERs are things like somebody tripped and sprained his ankle or all different things like that.

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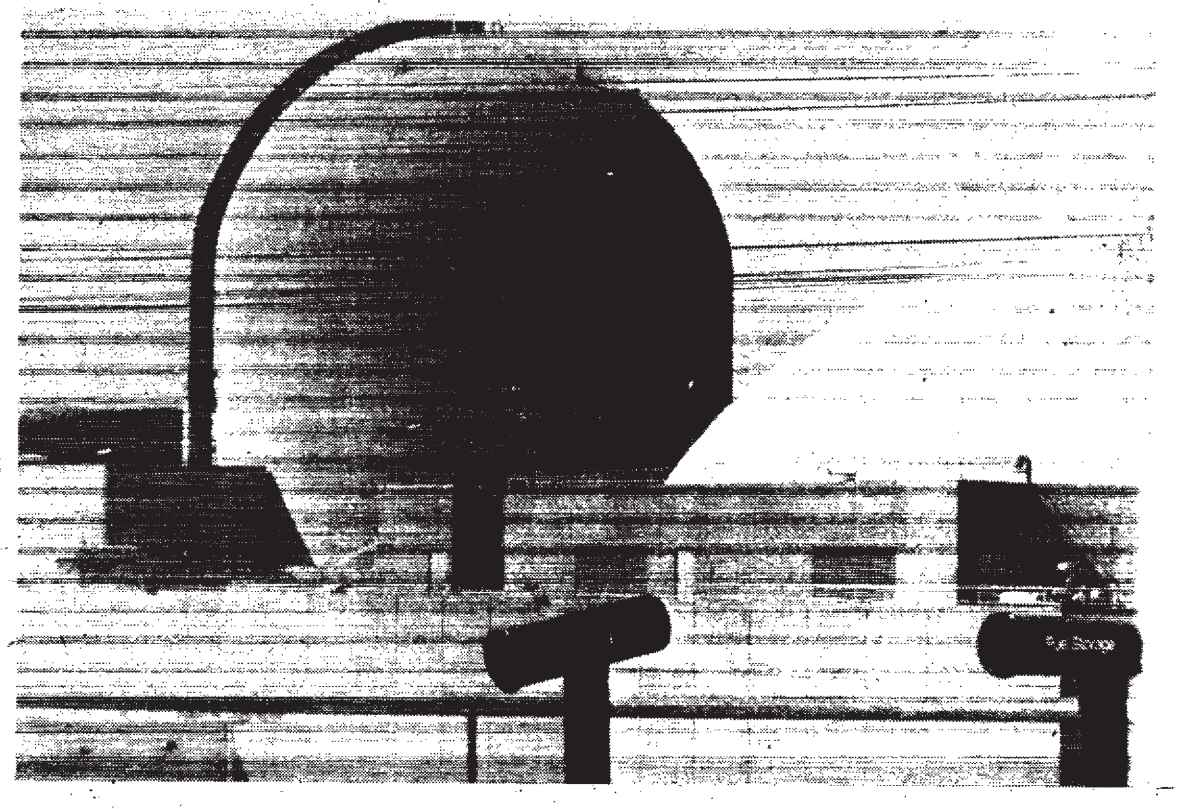
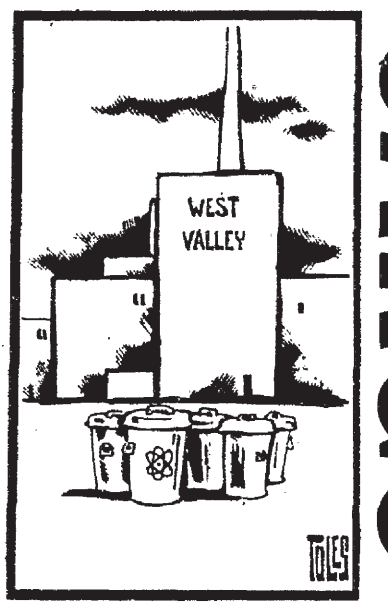


HOT CARGO



Anne Lintner

When it comes to the transportation of radioactive materials (RAM), we should consider that "it is not a question of if, but when," there will be an accident that results in the death of thousands of people. One truckload of spent fuel rods from a nuclear power plant contains more radioactivity than was released by the Hiroshima bomb. With thousands of RAM shipments across the country annually (as the saying goes...), accidents will happen. And they have.

Granted, the shipment of radioactive wastes could be conducted safely. The Department of Transportation requires that reactor waste be moved in carefully regulated 35 ton casks (each costing $1.5 million) which are leak-proof, cooled by water and air (reactor waste is twice as hot as boiling water)and "resistant to sabotage". Also, drivers are supposed to be well trained professionals who are able to deal with emergancy situations. Local safety officials along the route of transport are supposed to be able to facilitate the proper handling of emergancies. But several factors have, in the past, prevented the safe control of RAM shipments. First, there is the age-old example of corporate executives virtually squirming in their chairs figuring out ways to cut costs. This results in the use of low quality shipping casks, and/or low paid labor. For example, in Illinois, the bed of a tractor-trailer collapsed under the weight of its cargo: a cask of nuclear spent-fuel. Second, the Nuclear Regulatory Commission (NRC) has deemed that it is in the "interest" of national security that information about RAM shipments be kept secret in order to prevent possible sabotage. Unfortunately this often includes the very officials that ought to be notified of the route of RAM shipments.

NYPIRG (New York Public Interest Research Group) has recently conducted surveys and interviews of local safety officials in Central New York. These local officials are critical to maintaining safety and in theory are the first line of defense against critical accidents. 24 out of 31 surveyed were not aware that radioactive waste would be passing through their assigned region, much less the timing and route of the shipments. This situation is indicative of the negligence on the part of both the nuclear industry and the federal agencies involved in regulating RAM shipments. A 1979 report of the General Accounting Office (a congressional watchdog) stated tha: "Federal agencies responsible for the safe transport of radioactive materials have not developed and enforced policies which adequately protect the public from radiation..." As a result, there have been several near disasters on our highways. In 1977, 10,000 pounds of uranium concentrate (yellowcake) spilled over a 5,000 suare foot area in Colorado. Neither the driver of the shipment, nor the State Police, nor firefighters at the scene were trained in dealing with RAM emergencies. The decontamination of the area was delayed for three days while the regulatory authorities argued about whose responsibility it was to clean up the mess. Also in 1977, a train derailed near Rockingham, North Carolina carrying uranium herafloride. The train caught on fire, burning for eight hours while the local fire department, Army personel and radiological teams disagreed about whether or not a radiation hazard existed.

These examples are not isolated incidents. A Dept. of Transportation report states that between 1971 and 1979 there were (only) 463 "incidents" reported involving RAMs. Of these, 323 were highway accidents; 275 of the accidents were classified as minor, and "due to improperly prepared shipments." The others were more severe, involving accidents resulting in packages of RAM burned, thrown from the vehicle, or rolled by the vehicle. Who knows, there may have been more: if you were part of a nuclear power industry, would you report a fuck-up if you didn't have to? Human life is threatened at all stages in the production of nuclear energy, from the mining of the uranium to the storage of spent-fuel. Far too often, the nuclear industries have effectively suppressed common knowledge about the dangers of nuclear power. This has got to stop.

A good example of the complications involved in the shipment of RAM is the case of Virginia Electric Power Company (VEPCO) and the faulty Westinghouse Steam generator tubes. Westinghouse produced steam generator tubes for 22 pressurized water reactors across the country. The steam tubes are corroding, cracking and denting due to low quality metal and improper welding. VEPCO purchased several of these tubes and has discarded at least nine of them. The problem is where do you put a piece of metal 16 feet wide and 40 feet long that weighs 220 tons and is "gushing radioactivity"? Most of the faulty tubes are "resealed and stored permanently in concrete 'mausoleums' at site". But VEPCO plans to ship one generator to Hanford, Washington (a permanent waste storage site) to investigate the causes of the defects. Here's the catch: the Dept. of Transportation requires that the package be wrapped securely and that the radiation extending six feet from an "open transport vehicle" be limited to 10 millirems an hour. To avoid these stringent rules and expenses, VEPCO will ship the cargo via barge, down the east coast, through the Panama Canal and up to Washington state, all under the auspices of the Department of Energy. The cargo will be wrapped with only a tarp aroung it, and with two parallel concrete walls at the side that are one foot thick, twenty feet high and fifty feet long (serving as a "shadow shielding"), although the radiation will be four times as strong at the front where there is no shield. The Dept. of Energy claims that there will be "no negligable results" from this shipment.

The Bulletin of the Atomic Scientists is a warning that the time is "four minutes to midnight" (according to their "doomsday clock") and ticking. If the negligence on the part of the nuclear industries continue, then this clock may become irreversable. There are things that we as voting citizens can do to stop the clock. Over one hundred communities have already outlawed the transportation of RAM within their municipal limits. This has caused the nuclear industries time and trouble in driving way out of the way to deliver its hot cargo. Maybe they will begin to see the need for responsible form of nuclear waste management. Or, maybe citizen pressure can make the nuclear industry cease to be profitable.... ●

West Valley: A Challenge

reprinted from the SIERRA CLUB radioactive waste campaign fact sheet

Silos dot the rolling open farmland. Geurnsey cows graze next to spring-fed brooks. Turn a corner and the pastoral scene dissolves. A cyclone fence confronts the eye. Beyond is the hum of elctricity. Pipes burp steam. Cranes stand abandoned, like frozen dinosaurs. Here is the Love Canal of the nuclear industry--West Valley.

Once the darling of Governor Nelson Rockefeller's eye, West Valley is now one of the most deadly concentrations of radioactive waste in the Northeast. West Valley is only 35 miles south of Buffalo and Lake Erie, the drinking water supply for 11 million people. West Valley is an accident waiting to happen.

But once West Valley was the dream of the nuclear industry. The plant would reprocess nuclear fuel thereby providing the supposed answer to uranium shortages annual nuclear reactor production of 30 tons of high level radioactive waste in the form of spent fuel.

Back in 1963, who could be against a reprocessing plant which promised an economic boon to a depressed rural area? The idea was simple. The long rods containing enriched uranium pellets that serve as reactor fuel would be processed. First, the long rods would be mechanically chopped up into one-inch pieces, then the pieces would be put through a series of chemical baths which would permit the extracting of plutonium and the uranium. These elements would then be re-used in reactors. Left would be a nasty wirches brew of liquid radioactive waste that would have to be disposed of somewhere--but, back in 1963, nobody was thinking clearly about that.

And again, in 1981, politicians are trying to revive the reprocessing dream. Citizens will have to re-educate policymakers regarding the high occupational exposures and excessive radiation releases to the environment which have occurred in commercial reprocessing. And policymakers will have to learn the material recovered, uranium and plutonium, is more expensive than natural uranium.

After plant operations began in 1966, the technological dream of reprocessing broke down. Equipment breakdowns were chronic. All clean-up and contamination work at the facility had to be done manually instead of by remote control. Unexpected fires broke out in work areas. The highly flammable zirconium fines left over after the chopping up of nuclear fuel rods spontaneously ignited. Workers at West Valley received the same amount of radiation that 4000 workers at Hanford did in 33 years!

The Rockefeller interests, finding the plant unprofitable, sold it to the Getty Oil Company, which let the lease terminate in December 1980 with responsibility for perpetual care of the facility turned over to the state and its taxpayers. The clean-up price tag for the entire site may go over $1 billion. Getty Oil, under legislation signed by ex-President Carter, is responsible for only 10% of the costs.

The toxic material at the West Valley site is in both liquid and solid form. It is found in underground tanks, in a burial ground, in a spent fuel pool and in the abandoned reprocessing building itself.

The liquid material is a toxic stew of 560,00 gallons of cesium, strontium, plutonium and other extremely hazardous radioactive isotopes. The liquid brew is so hot that it is close to boiling--190 F. This simmering, steaming liquid sits in an enormous pancake-shaped carbon steel pan that is 25 feet high and 75 feet across. The tank sits in a pan, which, in turn, sits inside a concrete vault with walls three feet thick. The vault is buried eight feet underground. Out of sight, but not out of mind.

The carbon steel tank has an expected lifetime of perhaps 26 more years. Similar tanks at Hanford, Washington and Savannah, South Carolina have leaked after only three years. The radioactive material inside the tank will be toxic for thousands of years.

Nobody knows what to do if and when a leak does occur in the tank. Nobody can predict when a leak will occur. Originally, the concept was that a leak would be caught in the five-foot high pan in which the tank sits. But, in December 1978, a routine check revealed that the pan had a leak. Nobody knows what caused the leak or how to repair it. But now if this toxic material seeps out of the tank, it will drip directly into the vault and contaminate the concrete.
The NRC, DOE and NFS claim that if this material ever reached the soil, it would move incredibly slowly--milli-meters per year. Similar promises were made at Maxey Flats, a burial ground in Kentucky. The operators and the Atomic Energy Energy Commission claimed that the burial ground would retain all of the plutonium for its 240,000-year hazardous life and that the migration of other radionuclides would be limited to centimeters or at most a meter or so each year. Yet, in just one decade, plutonium was found hundreds of meters from the burial ground and tritium, a radioactive form of hydrogen, was found hundreds of meters from the burial ground and tritium, a radioactive form of hydrogen, was found in streams up to three miles away. The burial ground has since been closed.

It is important to note that the industry argument regarding West Valley is that its contaminated buildings, unstable burial ground and corroding tanks is an anomaly. It will never happen again. The future(looked at through the industry's rose-colored glasses) will be different, brighter. Citizens must remember that the record is as poor at dozens of neglected uranium mill tailing sites, at abandoned Manhattan Project waste dumps, at Three Mile Island; and every nuclear reactor, itself, is becoming a similar radioactive waste monument. A legacy that will last for thousands of years, long past the life of concrete, past the lifetime of corporate polluters, past the lifetime of most governments. No state is collecting funds in the state treasury for perpetual maintenance. Further generations are being mortgaged for the short sighted benefit of a few corporations. A few short years of electricity are producing an infinity of West Valleys.

We often forget the innate beauty of our environment: Trees, flowers, grass, leaves and mud. Life's creations are there for our enjoyment free of charge. However, because people don't understand, cannot break out of the thought patterns of the power control groups, they are unable to come to terms with the personal and humanitarian issues of environmental safety and control. I often wonder why it is that such simple pleasures as nature must give way to the ugliness of population explosion-concentrated waste and pollution. One answer I have found to solving the the question of destruction of our earth has been the teachings of Guri Bani Sadre Hambleton and Krishna Joshua Ostrovsky. These wise souls have helped me repudiate my Marxist orientation, a philosophy which glorifies technology and, thus, environmental destruction. Joshua and Bani together are an immense spiritual force that must be tapped by every member of this college. They argue that it is not capitalism and the profit motive, vague impersonal forces in the economy, which cause the destruction of the earth. Rather, it is at the level of conciousness and understanding which produces the problems we see in Indian Point. We must attempt to reach out to the rich bankers and owners of Indian Point and persuade them of the better way and vision. Love and truth are there for the asking; we must glorify the naked tree and the hearth of holiness! Please, we must understand and glorify the beauty of understanding and the spirituality of simple trees. There is no more time for conflicts! We must rejoice about our truth-potentials for holiness. God be saved, truth of dogma. Karma is the Joshua-Bani fusion. Amen.

Jonathan M. Feldman

NATIONAL LABOR CONFERENCE FOR SAFE ENERGY AND FULL EMPLOYMENT

October 10-12, 1980
PITTSBURGH HILTON
Pittsburgh, PA

RESOLUTION NO. 1

AN EDUCATION/ACTION PROGRAM FOR A SAFE ENERGY/FULL EMPLOYMENT SOCIETY, submitted by-
The Sponsors of the First National Labor Conference For Safe Energy and Full Employment

I INTRODUCTION

Sentiment in the labor movement in support of safe energy and against nuclear power is rapidly growing. This is reflected by the large number of anti-nuclear resolutions adopted by international unions as well as by regions, districts and local unions, and by the broad sponsorship of this First National Labor Conference for Safe Energy and Full Employment.

The extremely serious problems associated with the use of nuclear power are increasingly recognized. These include: the potential catastrophic effects of nuclear accidents; the harm caused by even "low" levels of radiation; the inability of the nuclear industry or the federal government to dispose safely of radioactive wastes; the virtual impossibility of mass evacuations from areas around nuclear facilities; skyrocketing costs of nuclear construction; and the uncertainties and high costs involved in "decommissioning" retired reactors. It is also clear that safe alternatives to nuclear-generated electricity exist: coal--mined safely and burned cleanly--; the many solar technologies; and improved energy efficiencies. The economy can be fueled with adequate supplies of safe, affordable energy without further dependence on nuclear power plants.

The nuclear industry and many of its su!!orters in government seem determined to impose on the nation an expanded nuclear future, whether the American people like it or not. Employers engage in job blackmail, and harass workers who voice skepticism about nuclear power or organize on behalf of alternatives. The Kerr McGee Company's relentless hounding of Karen Silkwood, a nuclear worker and a member of the Oil, Chemical and Atomic Workers Union, AFL-CIO, who was killed on November 13, 1974, under most suspicious circumstances while trying to bring to light the Company's scandalous records of handling radioactive materials, is welldocumented.

Nuclear energy, heavily subsidized by government, absorbs billions of taxpayer and investment dollars and robs the nation of some of its best engineers and workers. It is hardly the ideal solution to the nation's unemployment problems. The mining of coal, development and installation of solar systems, retrofitting of building and private housing to make them more energy efficient, the construction of energy-saving mass transit, the revitalization of our rail system--all of these would provide millions and millions of jobs.

The facts are clear. We need an educational program to counter the propaganda of the nuclear industry and to inform working people about the availability of alternate safe energy sources and the jobs they will create. Armed with this information, the labor movement will demonstrate that it has the power, the numbers, the organization and the know-how to out this country on a safe energy and full employment path.

II PROGRAM OF ACTION

The Conference urges trade unionists to:

1. Conduct educational activities among co-workers, with widespread distribution of information on nuclear power and safe, economical alternatives;
2. Raise energy and employment issues at all levels of the labor movement; introduce resolutions committing unions to fight for safe energy and full employment policies, and against further dependence upon nuclear power;
3. Establish safe energy committees within local unions, as well as at state, district, regional and international levels;
4. Organize regional safe energy/full employment conferences, and similar educational/organizing events;
5. Participate in area anti-nuclear coalitions and urge the establishment of labor task forces in those coalitions where they do not already exist.
6. Forge links with women and minority groups, as well as farmers and all other progressive sectors of society, in a united struggle for a safe energy/full employment future;
7. Learn from the experiences of trade unionists in other countries involved for the fight in safe energy, and from the leading role the American labor movement has played in progressive social and economic struggles of past periods;
8. Support the Labor Committee for Safe Energy and Full Employment; build it as a clearinghouse for anti-nuclear trade unionists and as a supplier of educational materials;
9. Explore ways of expanding public, democratic control over energy resources and utilities;
10. Urge unions to gain more control over pension funds to ensure that these funds are invested in safe energy technologists which will provide union jobs;
11. Demand that workplace radiation exposures for nuclear workers be reduced to one-tenth their present levels, as recommeded by physicians and scientists who are concerned about workers' safety;
12. Demand that no worker in the nuclear industry lose his or her job in the transition away from nuclear power. Such workers must be guaranteed alternative employment at union wages with no interruption in income;
13. Support anti-nuclear referenda in local and state elections;
14. As a central, nation-wide focus for anti-nuclear trade unionists, during the period of November 8-16, 1980, build united actions in coalition with the rest of the anti-nuclear movement, observing the death of sister Karen Silkwood. Such activities should be in the form of rallies, demonstrations, mass meetings or other appropriate observances. ●

What is spent fuel — and what are we going to do with it?

reprinted from Citizen News; New York Public Interest Research Group Vol. 3, No. 2 April-May 1980

At fuel fabrication plants, enriched uranium is formed into cylindrical pellets about a half-inch in diameter, which are loaded into thin metal rods. Over 10 million of these pellets go into fuel assembly rods of one nuclear reactor core.

It is within this reactor core that the controlled chain reaction of atom splitting takes place, producing heat to boil water and create steam to turn giant electricity-generating turbines.

About once a year, the reactor core is opened for refueling. A third of the "spent" fuel rods are removed and should be placed in a cooling pool for about nine months before they can be transported. Even then, spent fuel is thousands of times more radioactive than fresh fuel. Some of its elements are foreign to nature and are now the deadliest materials known to science. They have to be isolated from the biosphere for about 250,000 years before they can be safely exposed.

Over two thousand metric tons of this spent fuel are being produced each year. Currently, only a small part of it leaves the reactor sites, including that which is shipped to Savannah River, South Carolina for government reprocessing research. The rest is stored at the nuclear power plants themselves. Since a number of the sites are already storing more spent fuel assemblies that they were designed to contain, however, the utility companies are intensifying their push for temporary and permanent away-from-reactor storage facilities (which,of course, will mean an increasing amount of spent fuel traveling on highways).

A permanent, safe solution for radioactive waste storage does not exist. The government has considered a number of schemes, most of which have been rejected. Among them are "extraterrestrial elimination" (shooting it into space), "ice-sheet disposal" (glacial burial), ocean dumping, and "deep geological isolation"--simply burying the waste in a rock medium like clay, shale, crystal rock, or salt. ●

EDITOR'S NOTE:

A PLAGUE IN SLOW MOTION

"A plague in slow motion." This grim assessment, spoken by public advocate Maurice Hinchey, reflects a growing concern about the proliferation of hazardous industrial waste.

Since World War II, some 4,000,000 new chemicals have been introduced for the production of consumer goods worldwide. And because of prohibitive costs, testing to determine the long-range effects is virtually non-existent. Industry and consumers, in a prolonged spell of arrogant indifference and ignorance, have disposed of these wastes largely through haphazard and potentially lethal methods. One of the most notorious examples is the dumping of nearly 37 million gallons of radioactive waste from the A-Bomb project near Tonawanda, NY.

While atomic waste provides activists with their most celebrated cause, the inordinate production and disposal of other hazardous chemical wastes continues unabated. Private industry in New York state alone annually produces nearly 10.5 million gallons of these wastes. It is estimated that nearly 50% of these wastes "disappear" illegally. In one recent case a New York contractor disposed of PCB wastes by dumping them along stretches of North Carolina highways. Other chemical contaminants end up in the water supply, causing nearly 600 wells in the New York Metropolitan area to be closed in the last three years. Aquifiers, long considered to be a pristine source of water, are no longer pure. Our society, with an abundance of petroleum-based chemicals, has opened a Pandora's box and "nobody knows exactly what the risk is."

The New York State Department of Environmental Conservation, recognizing the problem, has proposed for private industry the establishment of a large regional high-technology hazardous waste disposal facility on a parcel of state land.(The Ward Manor lands were briefly considered as a site.)

Yet, as Richard Booth recently noted, this is only an interim solution. The ultimate solution lies in the reduction of the volume of hazardous waste. This can only be accomplished through financial-technical incentives that encourage, and regulations that require, industries to reduce hazardous waste production. And that involves more than lone legislator proposing a bill. It involves the re-tooling of a callous, efficiency driven value system.●

"MY FATHER PASSED IT ON TO ME, SO I GUESS I'LL HAVE TO PASS IT ON TO YOU AND YOU'LL HAVE TO PASS IT ON TO YOUR KIDS. WHO WILL PASS IT ON TO THEIR KIDS. WHO WILL ..."

I am embarrassed about our residual political naivete and frightened by its necessary consequence--political impotence. Our concerns are private, self-enclosed. Anything not touched by the brush of personal concern, private goals and desires, is remote. Unreal. And certainly less important. This indifference, born of selfish concern, is, in this modern society, laden with the introduction of nearly four million new chemicals since World War II with unknown long-range effects, deadly. Yes, in the arena of Technik we are indeed modern, but we have yet to develop the moral apparatus to accompany this progress. This, of course, is an old theme, hammered upon the anvils of Faulkner, Steinbeck, and others, but some cliches are eternal truths rather than hollow phrases.

Scientific expertise, as inscrutable as the utterings of priests in former ages, is harnessed to the aims of corporations. The aim of the corporation, Mobil notwithstanding, is the destruction of a communal, thus concerted and other-oriented morality. Joe buys the royal blue Cadillac with the red rims and the white carpet because you can bet an hour's wages that John, the neighbor, ain't got no such thing. And if he don't, it ain't got nothing to do with the fact that Joe does. So there.

Thus, the central Marxist concern,,the fragmentation of the community, fostered by the capitalist mode of economics, emerges as a plausible , though somewhat didactic, explanation for the tragedy of Love Canal, the alarming increase in water contamination, and the accompanying callousness of corporations and government. But in many, including myself, these phenomena produce a slight uncomfortability, and perhaps a momentary sympathy, but never a sustained empathy that could transform itself into political action. One must think, for maximum efficiency in the attention to one's self, that somehow the Love Canal victims were not so innocent, though they are; that the cynical dumping of 37 million gallons of radioactive wastes near Tonawanda, NY(Linde Company official: "It is considered impossible to determine the course of subterranean streams and therefore, the responsibility of contamination could not be fixed.") was an isolated incident rather than a reflection of nationwide industrial practice.

The clamoring,the rattling of political armor begins only when the sanctity of one's private abode appears threatened. "I don't care what you do as long as it don't affect me." America suffers. Political vision, never extending beyond the scope of "I", becomes apolitical, inert.●

Think Twice:

The National Council of teachers of English has presented its annual doublespeak award to the Metropolitan Edison Co., operator of the Three Mile Island nuclear plant, for coining such terms as "energetic disassembly" (explosion), "rapid oxidization" (fire), and "normal aberration" (reactor accident).

-The Progressive-

With this special addition, THE BARD OBSERVER is changing hands once again. We of the OBSERVER staff welcome Mark Ebner as the new editor-in-chief. May his satirical skills serve him well. This issue, and all that it stands for, I dedicate to the Bard Solidarity group. Since the formation of the Solidarity group, we have tried to create an alternative means of exploring issues such as "POLLUTION PROBLEMS" outside of the classroom situation. We have tried to work with other Solidarity groups in order to further the goals of People's struggles. The People united will never be defeated! I hope that the Solidarity group shall carry on next year stronger than ever. May the spirit of Crazy Horse and Bobby Garcia be with you.

Shalom, Anne Lintner

Expanded Evolution:

How to survive without struggling

If we really understand Darwin's theories, then we know the survival of the fittest applies not simply to animal and vegetable life on earth, but to all life forms in the universe. We must expand our conception of the universe and the struggle for survival in it.

There are enormous disasters in store for earth. The most likely is nuclear war.

People living near atomic plants and waste sites are being exposed to radiation in a bizarre form of adaptation in the struggle for survival. The highest levels of plant and animal instinct and intelligence are thus getting exposure for plant and animal life so that perhaps a few may survive the blast and go on living in the thoroughly altered world after the 15,000 H bombs now in existence go off.

It is ironic that people have gathered increasingly in cities and lit them up at night so that most of us no longer see the stars. Other worlds. Computers and radio pictures tell us about the heavens. We are no longer in awe.

With loss of awe comes loss of perspective and respect. Loss of humility. Loss of balance. We do not know our place anymore. We frequently squander the resources of our home planet. We lay waste and plan destruction, and convince ourselves we are doing this so as to be good and go to heaven.

Earth is already heaven. Always was. Always will be. With or without humanity.

So why do we spend so much time and energy creating in overdose quantities the failure-proof means for our total self-elimination?

Because the splitting of the atom has so drastically escalated the level of our self-destructive capability, it is essential that we escalate our wisdom more. We must make a quantum leap in our understanding of the struggle for survival. It is being waged at many levels. The entries are not limited to members of the plant and animal kingdoms on earth.

Radioactivity is one of the more active and expansionary life forces in a very conscious way. Man no longer has control over the weapons systems which he has built. These have a life and consciousness of their own now. They will detonate themselves. We must begin immediately to attempt to regain control over these systems. We must declare the start of the disarmament race. Before it's too late.

If we fail to do this the atomic apocalypse will happen soon. It will be painful and quick. It will wipe out humanity. Forever.

Physically we can't adapt fast enough. We must use our wits to defuse the bomb we've built. Or we are gone. Zip.

Radioactivity will win a big victory over all other life forces. Any surviving life forms on earth will probably rejoice at the prospects of being rid of humanity for keeps.

How can you store or lock up such a powerful life force? Uranium 238 has a half life of 4,670,000,000 years. The radioactive drones are making electricity (they've seduced mankind into an enormously inefficient way of boiling water) and H bomb payloads as by-products in the process. These become the radioactive jet set in the missile nose cones, eagerly awaiting the orgy.

Man/Womankind is ready to do it. He's/ She's going to pull the switch.

It's the ultimate in stupidity. Each day we spend a billion dollars on war and self-annihilation in the name of defense, and only a few thousand on peace and survival research. It's the emperor's new clothes on a cosmic level. It's embarrassing.

What will you say when you see that big flash on the freeway?

This is no joke. We must laugh at our predicament, eat a quick piece of humble pie, then use all our tools, knowledge, common sense, instinct and ingenuity to put all that concentrated nuclear energy we've dug up, refined, and loaded the missiles with at embarrassingly high costs, back where we found it.

Underground.

And leave it there. ●

INDIAN POINT

cont. from page 2

SL: But what determines what has to be reported and what doesn't? Why would a demonstration that Con Ed was well-informed of be considered an accident?

BH: Well, see, that's what I'm saying is that we don't call them accidents. We call them LER's. Some of the groups like WESPAC call them accidents.

CL: Are these events determined by NRC regulations?

BH: Yeah. The regulations that we have to follow have gotten to the point where you have to record just about everything.

CL: Could you say something about Robert Pollard, who was the former on-site NRC inspector here until 1976, when he quit in dismay over the situation here?

BH: All I can tell you is that when he went on 60 Minutes in 1976 and called Indian Point "an accident waiting to happen," he was complaining about Unit Two, which he'd never been in, was not responsible for, and the complaints are things he never had discussed with his superiors. I've heard things that said he was not in good stead with his superiors, but I really don't want to speculate on it because I don't know. That's for your interpretation. What I'm saying is the things he mentioned on 60 Minutes, and later in the UCS petition were things he had never before discussed.

TK: Are you therefore refuting them?

BH: Yes,I'd refute them. Unit Two is not an accident waiting to happen. Let's put it another way. I would say that if you talk to people who work here , nine out of ten would say that they prefer working here to any station at the Con Ed system. This is, believe it or not, considered to be the Shangri-La of the system. Most of the people, including myself, live within a ten mile radius of the plant. These people have families and they like it here. Why? Because it's nice. It's clean, there's no smoke, air pollution. And, believe it or not, because they actually consider it to be safer than one of the other stations when you hear something like if a plant melted down, it would render an area the size of Pennsylvania uninhabitable permanently. It's total garbage. Complete and total garbage, alright? A gross exaggeration of the facts. You would need a complete rupture of the containment. We don't believe that can happen.

CL: Do you agree with the Rasmussen report on this?

BH: I would say that report is in line with the risk factors. Indian Point is actually by a factor of 10, safer than the average power plant.

CL: Factor of 10?

BH: That means that because we are where we are our plant has more things like shielding and safety systems, etc., than the average plant.

CL: OK, according to the UCS there are several safety devices not on Unit Two that have been put on Unit Three since the NRC looked it over. One of them is the Emergency Diesel Generator housing, which violates GDC 17. Also, it has inadequate Auxiliary Feedwater pumps.

BH: Let me--let's see--

CL: Yes or no?

BH: Let's go back. What you're saying, I know, are statements from Pollard. The containment buildings at both plants will withstand a tornado; at Unit Three, the entire building will withstand a tornado; at Unit Two, the Generator Building will not withstand a tornado.

CL: Yeah, well---the Emergency Diesel Generator--

BH: Now, seismically, the plant is designed to withstand a 5.5 on the Richter scale. That's the whole plant. There are certain portions of the plant which would withstand something a lot greater than that. Before the containment building for Unit Two came down, things like the Empire State Building would be falling over.

CL: The Empire State Building does not have the potential to spew radioactive waste.

BH: What I'm saying is that if we had an earthquake that devastating, I don't think it would make a hell of a lot of difference.

CL: I didn't get a satisfactory answer because you answered about the reactor containment.

BH: Well, you asked about four questions at once.

CL: Okay, about the Emergency Diesel Generator. You gave me the safety criterion for the containment. Now--

BH: There's another difference between Unit Two and Three. Unit Two is newer. Unit Two is not required to have everything that Unit Three has.

Upon repetition of this question, Healey states that since I am quoting Pollard as my source, he considers my question invalid because it is about Unit Two, and Pollard, he claims, was never involved with that unit. The following exchange ensues:

CL: Then I'll confine myself to comments about Unit Three. According to him, there is inadequate fire protection for electrical cables in Unit Three.

BH: I don't know much about Unit Three, to be honest with you, because I dont work for PASNY. I know Unit Two--I've not been in Unit Three.

Thus, effectively putting an end to all other questions I had. ●